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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,893	01/17/2001	Shih-Chieh Hung	11709-003001	6011

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EXAMINER	
DUNSTON, JENNIFER ANN	
ART UNIT	PAPER NUMBER
1636	

MAIL DATE	DELIVERY MODE
07/11/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.**	**Applicant(s)**
	09/761,893	HUNG ET AL.
	Examiner	**Art Unit**
	Jennifer Dunston	1636

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 14 June 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☒ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1,4,6,9-11 and 34-38*.
   Claim(s) withdrawn from consideration: *12-20*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Jennifer Dunston/
Primary Examiner
Art Unit: 1636

Continuation of 3. NOTE: The proposed amendment to include new claim 42 would require further search and consideration. A "pore size of about 0.4-16 microns in diameter so that the small-sized hematopoietic cells can pass through the pores of the upper plate to reach the lower plate base before adhereing" was not previously considered in the prior action. New rejection(s) would be necessitated by entry of the amendment. For example, the claims lack antecedent basis for "the small-sized hematopoieitic cells" and a new rejection under 35 USC 112, second paragraph, would need to be made. Furthermore, the pore size of 0.4-16 microns lacks support in the originally filed specification, drawings and claims. Thus, the addition of new claim 42 raises the issue of new matter.

Continuation of 11. does NOT place the application in condition for allowance because: Claims 1, 4, 6, 9, 11 and 34-38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al (US Patent No. 5,811,094, cited in a prior action; see the entire reference) in view of Prockop et al (US Patent No. 7,374,937 B1, effective date March 14, 2000, cited in a prior action; see the entire reference) and Matsui et al (US Patent No. 4,871,674, cited in a prior action; see the entire reference).

Applicant's arguments filed 6/14/2011 have been fully considered but they are not persuasive.

The response asserts that the amendment of claim 1 to recite "recovering with trypsin-EDTA" distinguishes the claimed method from the teachings of the cited prior art.

This argument is not found persuasive. The prior art teaches culturing mesenchymal stem cells on plastic and recovering the mesenchymal stem cells with trypsin-EDTA (Caplan et al. e.g., paragraph bridging columns 19-20; paragraph bridging columns 40-41).

The response asserts that there was no reason and no reasonable expectation of success to replace Caplan's Leukosorb filter with a 10 micrometer isopore polycarbonate membrane disclosed by Prockop or to use Matsui's culture device. The response asserts that the Examiner merely provided a conclusory statement of obviousness without providing any rationale to combine the references.

These arguments are not found persuasive. Caplan et al teach it is desirable to remove cells such as red blood cells from the mixed composition of cells comprising mesenchymal stem cells (e.g., column 45, line 45 to column 46, line 34). Furthermore, Caplan et al teach that mesenchymal stem cells adhere to plastic (e.g., polycarbonate) for culturing (e.g., column 8, lines 20-44). One of skill in the art would have a reason to use the polycarbonate filter containing 10 micrometer pores of Prockop et al to remove the red blood cells. Moreover, one would have had a reason to use the culture dish of Matsui et al containing the polycarbonate filter, because Caplan et al teach that mesenchymal stem cells adhere and grow on plastic. One would have been motivated to make such a modification in order to provide an enriched population of mesenchymal stem cells without red blood cells without having to perform the extra steps of using a separate Leukosorb filter and hydroxyapatite taught by Caplan et al. One would have had a reasonable expectation of success, because both Caplan et al and Prockop et al teach that mesenchymal stem cells adhere to plastic (e.g., Caplan et al. at column 8, lines 20-44; Prockop et al. at column 1, lines 27-55; column 2, lines 11-33; column 25, lines 24-35; column 26, lines 48-58). The rationale to combine the references was provided at page 7 of the Office action mailed 4/6/2011.

The response asserts that Prockop et al teach the separation of larger MSCs from smaller RS cells by using a frozen stock of MSCs that did not contain hematopoietic stem cells.

This argument is not found persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., separation of MSCs and hematopoietic stem cells) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The response asserts that the present application solved a problem that was long standing in the art. The response identifies the long-felt need as reliably inducing significant proliferation of MSCs in culture without inducing differentiation of the MSCs as they proliferate.

These arguments are not found persuasive. Establishing long-felt need requires objective evidence that an art recognized problem existed in the art for a long period of time without solution. The relevance of long-felt need and the failure of others to the issue of obviousness depends on several factors. First, the need must have been a persistent one that was recognized by those of ordinary skill in the art. Second, the long-felt need must not have been satisfied by another before the invention by applicant. Third, the invention must in fact satisfy the long-felt need. See MPEP 716.04. Caplan et al teach growth of mesenchymal stem cells without differentiation (e.g., page 2, lines 20-26; column 9, lines 45-55). Thus, the need was met prior to the invention by applicant. Further, Prockop et al teach that low density culture solves the prior art problems and improves proliferation of mesenchymal stem cells without differentiation (e.g., column 11, line 33 to column 12, line 3).

For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

Claim 10 stands rejected 35 U.S.C. 103(a) as being unpatentable over Caplan et al (US Patent No. 5,811,094, cited in a prior action; see the entire reference) in view of Prockop et al (US Patent No. 7,374,937 B1, effective date March 14, 2000, cited in a prior action; see the entire reference) and Matsui et al (US Patent No. 4,871,674, cited in a prior action; see the entire reference) as applied to claims 1, 4, 6, 9, 11 and 34-38 above, and further in view of Pittenger et al (Science, Vol. 284, pages 143-147, 1999, cited in a prior action; see the entire reference).

This rejection is maintained for the reasons made of record in the previous office actions.

Claims 1, 4, 6, 9, 11 and 34-38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al (US Patent No. 5,811,094, cited in a prior action; see the entire reference) in view of Burkitt et al (Wheater's Functional Histology (1993), page 60, cited in a prior action) and Mussi et al (US Patent No. 5,409,829, cited in a prior action; see the entire reference).

This rejection is maintained for the reasons made of record in the previous office actions.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al (US Patent No. 5,811,094, cited in a prior action; see the entire reference) in view of Burkitt et al (Wheater's Functional Histology (1993), page 60, cited in a prior action) and Mussi et al (US Patent No. 5,409,829, cited in a prior action; see the entire reference) as applied to claims 1, 4, 6, 9, 11 and 34-38 above, and further in view of Pittenger et al (Science, Vol. 284, pages 143-147, 1999, cited in a prior action; see the entire reference).

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Claims 1, 4, 6, 9, 11 and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al (US Patent No. 5,811,094, cited in a prior action; see the entire reference) in view of Guirguis (US Patent No. 5,077,012, cited in a prior action; see the entire reference) and Matsui et al (US Patent No. 4,871,674, cited in a prior action; see the entire reference).

This rejection is maintained for the reasons made of record in the previous office actions.

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This rejection is maintained for the reasons made of record in the previous office actions.

At paragraph 6, the reply states that the present application included an incorporation by reference of the foreign priority application. However, not such incorporation by reference statement could be found on the filing date of the present application, either in the specification or transmittal letter. Thus, adding a limitation from the foreign priority application would raise the issue of new matter.